

AMENDMENTS TO THE CLAIMS:

1.(currently amended): A home agent connected to a first network and providing mobility transparent communications to a mobile node temporarily connected to a second network as a mobile destination different from ~~[[a]]~~ said first network which is normally utilized, said home agent comprising:

a module receiving a new registration request from said mobile node via said second network;

a module detecting, when receiving the new registration request, that lease addresses of a DHCP server and addresses pooled beforehand are all occupied, wherein said DHCP server is connected said home agent via said first network and is an address lender; [[and]]

a module searching for, when detecting that all the addresses are occupied, an address on the basis of self-managed information and allocating the searched address to said mobile node; and

a module temporarily pooling as the self-managed information the address requested to be opened by said mobile node without immediately returning the address to said DHCP server.

2.(cancelled)

3.(currently amended): A home agent according to ~~claim 2~~ claim 1, further comprising a module allocating the temporarily pooled address to said mobile node making the new registration request.

4.(currently amended): A home agent according to claim 1, further comprising a module extracting as the self-managed information an address just before time-out of a life time and allocating this extracted address to said mobile node making the new registration request.

5.(original): A home agent according to claim 4, wherein the address just before the time-out of the life time is extracted from a mobile binding list.

6.(currently amended): A home agent according to claim 1, further comprising a module administering as the self-managed information address allocation priorities of users corresponding to said mobile nodes.

7.(original): A home agent according to claim 6, further comprising a module, when the new registration request is given from said mobile node used by a higher priority user, extracting a lower priority user, stopping providing a mobile service to the extracted user, and allocating an address used by the extracted user to said mobile node making the new registration request.

8.(original): A home agent according to claim 6, further comprising a module extracting, when the new registration request is given from said mobile node used by a higher priority user, all lower priority users, and stopping providing mobile services to all the lower priority users extracted.

9.(original): A home agent according to claim 7, further comprising a module temporarily pooling the address used by the user stopped from receiving the mobile service

without immediately returning the same address to said DHCP server.

10.(currently amended): An address allocation management method in a home agent connected to a first network and providing mobility transparent communications to a mobile node temporarily connected to a second network as a mobile destination different from [[a]] said first network normally which is utilized, said method comprising:

receiving a new registration request from said mobile node via said second network;

detecting, when receiving the new registration request, that lease addresses of a DHCP server and addresses pooled beforehand are all occupied, wherein said DHCP server is connected said home agent via said first network and is an address lender; [[and]]

searching for, when detecting that all the addresses are occupied, an address on the basis of self-managed information and allocating the searched address to said mobile node; and

temporarily pooling as the self-managed information the address requested to be opened by said mobile node without immediately returning the address to said DHCP server.

11.(cancelled).

12.(currently amended): An address allocation management method according to ~~claim~~ claim 10, further comprising allocating the temporarily pooled address to said mobile node making the new registration request.

13.(currently amended): An address allocation management method according to claim 10, further comprising extracting as the self-managed information an address just before time-out

of a life time and allocating this extracted address to said mobile node making the new registration request.

14.(original): An address allocation management method according to claim 13, wherein the address just before the time-out of the life time is extracted from a mobile binding list.

15.(currently amended): An address allocation management method according to claim 10, further comprising administering as the self-managed information address allocation priorities of users corresponding to said mobile nodes.

16.(original): An address allocation management method according to claim 15, further comprising, when the new registration request is given from said mobile node used by a higher priority user, extracting a lower priority user, stopping providing a mobile service to the extracted user, and allocating an address used by the extracted user to said mobile node making the new registration request.

17.(original): An address allocation management method according to claim 15, further comprising extracting, when the new registration request is given from said mobile node used by a higher priority user, all lower priority users, and stopping providing mobile services to all the lower priority users extracted.

18.(original): An address allocation management method according to claim 16, further

comprising temporarily pooling the address used by the user stopped from receiving the mobile service without immediately returning the same address to said DHCP server.

19.(new): A home agent for transferring a packet for mobile-IP, comprising:

a first module receiving a registration request from a mobile node via a mobile-IP network;

a second module allocating an IP address to said mobile node, said IP address being selected from one of a DHCP server, a first pool storing IP addresses, and a second pool storing IP addresses; and

a third module storing an IP address released from the mobile node in the second pool for a predetermined period of time.